

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

CENTER FOR BIOLOGICAL DIVERSITY, *et al.*,

Plaintiffs,

v.

U.S. FISH AND WILDLIFE SERVICE, *et al.*,

Defendants.

Case No. 21 Civ. 5706 (LJL)

**MEMORANDUM OF LAW IN SUPPORT OF DEFENDANTS' CROSS-MOTION FOR
SUMMARY JUDGMENT AND IN OPPOSITION TO PLAINTIFFS' MOTION FOR
SUMMARY JUDGMENT**

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PRELIMINARY STATEMENT

Plaintiffs challenge the decision of U.S. Fish and Wildlife Service (“FWS”) that listing the eastern hellbender as an endangered or threatened species was “not warranted” pursuant to Section 4 of the Endangered Species Act (“ESA”), 16 U.S.C. § 1533(b)(3)(B). *See Endangered and Threatened Wildlife and Plants; 12-Month Petition Finding and Endangered Species Status for the Missouri Distinct Population Segment of Eastern Hellbender*, 84 Fed. Reg. 13,223 (Mar. 27, 2019), AR 1–15.¹

FWS’s decision is reasonable and supported by the administrative record. FWS reviewed the best available scientific and commercial data, as well as the opinions of a team of eleven scientists with expertise in the eastern hellbender biology, status, and trends across its range. FWS applied its expertise and judgment to this information and determined that the eastern hellbender did not qualify as an endangered or threatened species, but a distinct population segment (“DPS”) of the eastern hellbender in Missouri did qualify as an endangered species.² Contrary to Plaintiffs’ efforts to impose their judgment in place of FWS, the agency entrusted by Congress to make decisions on these scientific matters in its area of technical expertise, FWS examined the relevant data and articulated an adequate explanation that rationally connected the underlying facts and expert guidance to its decision not to list the eastern hellbender as endangered or threatened. FWS engaged in a rigorous process with scientists having expertise in the eastern hellbender, and it did not ignore or mischaracterize its own conclusions or make assumptions counter to the best available scientific and commercial data.

¹ All citations to the Administrative Record in this memorandum of law take the form “AR ####.”

² Plaintiffs do not challenge the listing of the Missouri DPS as an endangered species.

Because Plaintiffs have failed to demonstrate that FWS’s findings were arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law, the Court should reject Plaintiffs’ attempts to usurp FWS’s role. The Court should instead deny Plaintiffs’ motion for summary judgment, grant Defendants’ cross-motion, and enter judgment in favor of Defendants.

BACKGROUND³

A. Statutory and Regulatory Framework

In 1973, Congress enacted the ESA, 16 U.S.C. § 1531 *et seq.*, “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] to provide a program for the conservation of such endangered species and threatened species . . .” 16 U.S.C. § 1531(b). Section 4 of the ESA directs the Secretary to determine which species should be listed as threatened or endangered. 16 U.S.C. § 1533(a)(1).

³ The government has not submitted a Rule 56.1 statement because this is a case brought pursuant to the Administrative Procedure Act (the “APA”), and the administrative record is the operative factual record on which the court’s review is based. Because APA claims present only legal issues regarding the lawfulness of the government’s action in light of the administrative record, courts have generally found that Rule 56.1 Statements are not required. *See Just Bagels Mfg., Inc. v. Mayorkas*, 900 F. Supp. 2d 363, 372 n.7 (S.D.N.Y. 2012) (opining that cases based on the review of an administrative record “present[] only a question of law” and directing parties not to submit Local Rule 56.1 statements); *see also Aleutian Capital Partners, LLC v. Hugler*, No. 16 Civ. 5149 (ER), 2017 WL 4358767, at *2 n.3 (S.D.N.Y. Sept. 28, 2017) (“Because this action turns entirely on the administrative record and presents only legal issues, Rule 56.1 statements are unnecessary.”); *Glara Fashion, Inc. v. Holder*, No. 11 Civ. 889 (PAE), 2012 WL 352309, at *1 n.1 (S.D.N.Y. Feb. 3, 2012) (no Rule 56.1 statement required in administrative agency review case); *Barahona v. Napolitano*, No. 10 Civ. 1574 (SAS), 2011 WL 4840716, at *1 (S.D.N.Y. Oct. 11, 2011) (government properly submitted administrative record in lieu of Rule 56.1 Statement); *accord Singh v. BIA*, No. 15 Civ. 5541 (PKC), 2017 WL 727541, at *1 n.1 (S.D.N.Y. Feb. 23, 2017); *Karpova v. Snow*, 402 F. Supp. 2d 459, 465 (S.D.N.Y. 2005) (summary judgment appropriate without submission of statements of undisputed material facts in APA cases because the administrative record provides the Court with “all of the information necessary to determine whether material disputes of fact exist”).

An endangered species is one that is “in danger of extinction throughout all or a significant portion of its range,” while a threatened species is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” 16 U.S.C. § 1532(6), (20). “The term ‘species’ includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” *Id.* § 1532(16).

The term “significant portion of its range” is not further defined in the ESA. At the time of the listing decision in March 2019, FWS’s then-most-recent definition of “significant,” AR 28–62, had been invalidated by the courts. *See, e.g., Desert Survivors v. U.S. Dep’t of the Interior*, 336 F. Supp. 3d 1131, 1133–37 (N.D. Cal. 2018); AR 8. Accordingly, FWS looked “to identify portions that may be significant by looking for portions of the species’ range that could be significant under any reasonable definition of ‘significant,’” by “look[ing] for any portions that may be biologically important in terms of the resiliency, redundancy, or representation of the species.” AR 8.

A species may be listed as an endangered species or threatened species under the ESA in one of two ways: either on the initiative of the Secretary or as a result of a petition submitted by an “interested person.” *Id.* § 1533(b)(3)(A). If the agency receives a petition, ESA Section 4(b)(3)(A) states that, within 90 days, “[t]o the maximum extent practicable,” the Secretary must determine whether the petition presents “substantial scientific or commercial information indicating that the petitioned action may be warranted.” *Id.* This is commonly referred to as the “90-day finding.”

Where, as here, the Secretary makes a “positive” 90-day finding (*i.e.*, determines a petition presents “substantial scientific or commercial information indicating that the petitioned

action may be warranted”), then the Secretary begins a “review of the status of the species concerned” and must make a second finding (commonly referred to as a “12-month finding”) that: (a) the petitioned action is not warranted; (b) the petitioned action is warranted; or (c) the petitioned action is warranted but precluded by higher priority pending proposals and expeditious progress is being made to list, delist, or reclassify species (“warranted but precluded finding”). *See* 16 U.S.C. § 1533(b)(3)(B); 50 C.F.R. § 424.14(h)(2).

The ESA directs the Secretary to determine whether a species should be listed as an endangered species or threatened species because of any one of five listing factors: (A) the present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence. *Id.* § 1533(a)(1). The determination whether to list a species must be made

solely on the basis of the best scientific and commercial data available to him [or her] after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction; or on the high seas.

Id. § 1533(b)(1)(A).

If the Secretary determines that listing a species is warranted, she must publish a notice in the Federal Register that includes the complete text of a proposed rule to implement the action. *Id.* § 1533(b)(3)(B)(ii). The Secretary must act on a proposed rule within one year of the date of its publication. *Id.* § 1533(b)(6)(A). At that point, the Secretary may promulgate a final rule, withdraw the proposed rule if she finds that there is not sufficient evidence to justify it, or extend

the one-year period for consideration by not more than six months if she finds that there is “substantial disagreement regarding the sufficiency or accuracy of the available data relevant to the determination” *Id.* § 1533(b)(6)(B)(i). If the Secretary determines that listing a species is not warranted (commonly referred to as a “not warranted finding”), the petition process terminates and is subject to judicial review. *Id.* § 1533(b)(3)(C)(ii).

B. Factual Background

1. Characteristics of the Eastern Hellbender

The hellbender (*Cryptobranchus alleganiensis*) is a species of salamander with two recognized subspecies: (i) the Ozark hellbender (*C. alleganiensis bishopi*), and (ii) the eastern hellbender (*C. alleganiensis alleganiensis*). AR 3. The eastern hellbender is a large, entirely aquatic salamander found in perennial stream across 15 states from northeastern Mississippi, northern Alabama, northern Georgia, Tennessee, western North Carolina, western Virginia, West Virginia, Kentucky, southern Illinois, southern Indiana, Ohio, Pennsylvania, western Maryland, and southern New York, with disjunct populations occurring in east-central Missouri. AR 3.

Eastern hellbender streams are usually fast-flowing, cool, and highly oxygenated. AR 3, 5153, 6448, 6456. Eastern hellbenders respire through their skin, aided by prominent, high vascularized skin folds, and they are not well adapted to low-oxygen conditions. AR 3, 2733–34, 7035, 7575. In addition, low water conductivity is an important habitat requirement. AR 3, 5170–71.

Boulders provide cover and breeding sites and are the most important indicator of adult eastern hellbender habitat. AR 3, 2831, 3680, 5203. Hellbender nesters are typically excavations beneath partially embedded, large (greater than 30 cm), flat rocks with a single opening facing downstream or perpendicular to streamflow. AR 3, 7442. Females deposit eggs under a nest

rock, and males externally fertilize the egg clutch, after which a single male defends the nest from other hellbenders. AR 3, 7044, 7459–60. Larvae are typically found within the interstices of cobble and gravel, and occasionally under large rocks. AR 3, 3586–87, 6334, 7086. Larvae lose their gills about 1.5 to 2 years after hatching, and juveniles sexually mature at an age of approximately 5 to 6 years. AR 3, 5152–53, 7048. Maximum age is not known with certainty, but estimates suggest that eastern hellbenders can live at least 25 to 30 years in the wild. AR 3, 7173, 7534.

Adults are primarily nocturnal and eat crayfish and, to a lesser degree, small fish. AR 3, 7182, 7447, 7522. Other occasional food items include insects and larval and adult frogs. AR 3, 2097, 6452, 7209. The diet of larval eastern hellbenders consists mainly of aquatic insects. AR 3, 6510, 7218. Eastern hellbenders occupy relatively small home ranges of approximately 30 square meters to approximately 2,212 square meters, but they are also capable of long distance movements, which have been documented up to 12.9 kilometers. AR 3, 1939, 4127, 5354, 6559, 6636, 7184.

2. FWS Undertakes a 12-month Finding for the Eastern Hellbender

FWS first identified the eastern hellbender as a candidate species for which FWS had information the proposed listing was possibly appropriate, but for which conclusive data on biological vulnerability and threats were not available to support a proposed rule at that time, in its December 30, 1982, Candidate Notice of Review, 47 Fed. Reg. 58,454. AR 2. In the February 28, 1996, Candidate Notice of Review, FWS discontinued the category of candidates then-applicable to the hellbender, limiting candidacy to those fish, wildlife, and plants for which FWS has on file sufficient information on biological vulnerability and threats to support preparation of a listing proposal, but for which development of a listing rule is precluded by other higher

priority listing activities, and thus, the hellbender was no longer considered a candidate species. AR 2.

Subsequently, FWS added the Ozark hellbender subspecies to the candidate list on October 30, 2001, 66 Fed. Reg. 54,808, and it remained on the list into 2010. AR 2–3. In April 2010, Plaintiff Center for Biological Diversity petitioned FWS to list 404 aquatic, riparian, and wetland species from the southeastern United States under the ESA. AR 3. The hellbender was among those 404 species. AR 3. FWS published a proposed rule to list the Ozark hellbender subspecies as endangered on September 8, 2010, 75 Fed. Reg. 54,561 (Aug. 19, 2010). AR 3.

On September 27, 2011, FWS published a “positive” or “substantial” 90-day finding for the hellbender and solicited information about, and initiated a status review for, the species, 76 Fed. Reg. 59,836. AR 3. A final rule listing the Ozark hellbender subspecies as endangered was published on October 6, 2011, *Endangered and Threatened Wildlife and Plants; Endangered Status for the Ozark Hellbender Salamander*, 76 Fed. Reg. 61,956 (Sept. 26, 2011). AR 3.

In 2014, after the Center for Biological Diversity filed a complaint against FWS for failure to complete a 12-month finding for the hellbender within the statutory timeframe, FWS entered into a settlement agreement that required FWS to deliver a 12-month finding for the eastern hellbender subspecies to the Office of the Federal Register by March 31, 2019. AR 3. On March 27, 2019, FWS delivered the 12-month finding, which was published in the Federal Register on April 4, 2019, 84 Fed. Reg. 12,223. AR 1–15. That determination is the subject of this APA challenge.

3. FWS Conducts a Species Status Assessment

In undertaking a 12-month finding for the hellbender species, FWS first noted that it had already listed the Ozark hellbender subspecies as endangered. AR 3. Consequently, FWS

conducted a species status assessment (“SSA”) for the eastern hellbender subspecies only, memorialized its review of the available scientific and commercial information and its collective expert opinions. AR 3, 64–1086. FWS completed the final 174-page SSA report on July 20, 2018. AR 74–177. An SSA, among other things, evaluates the current and projected viability of a species. AR 4, 178.

FWS staff from seven FWS offices completed the SSA, with input from eastern hellbender experts from the Missouri Department of Conservation, Western Pennsylvania Conservancy, the Georgia Department of Natural Resources, Lee University, Virginia Tech, the Virginia Department of Game and Inland Fisheries, Ohio State University, the Nashville Zoo, Lycoming College, the North Carolina Wildlife Resources Commission, and Purdue University. AR 75.

In order to “ensure [its] analyses are rigorous and based on the best available science,” FWS “sought out expert counsel to fill-in critical gaps in the state-of-knowledge” about the eastern hellbender. AR 179. FWS specifically “sought out expertise relating to Eastern hellbender biology, status, and trends across its historical range,” and it identified and invited 15 experts—11 of whom eventually attended an in-person workshop—who had “substantive knowledge through learning, experience, or research.” AR 75, 180, 188. Following a “well-established practice for using expert input to make decisions under uncertainty,” FWS prepared and queried the experts, and engaged in elicitation exercises with the experts, to obtain their opinions concerning 21 different influences on the eastern hellbender. AR 181. Ultimately, 11 influences were selected for incorporation into future-scenario analysis, and the experts were asked to “identify the influences that would be relevant into the future” and to give the “expected composite magnitude of impact of these influences in four geographical areas” called “adaptive

capacity units” (“ACUs”) that were delineated and vetted with conservation genetics experts. AR 181–82. The four ACUs were identified as: (1) Missouri River drainage (“MACU”); (2) Ohio River-Susquehanna River drainages (“OACU”); (3) Tennessee River drainage (“TACU”); and (4) Kanawha River drainage (“KACU”). AR 182. The experts were asked to opine on population health, population response to stressors, and unknown population status. AR 182–86, 189–97.

The expert elicitation process involved an established “4-step elicitation method, which helps minimize anchoring and over-confidence problems.” AR 180. “The 4-step method entails asking experts to first provide their lowest and highest reasonable estimates for the variable in question, followed by their level of confidence (50-100%) that the true value of the variable falls within their states range (lowest to highest values), and lastly, the most likely estimate.” AR 180–81. This approach followed the academic literature on reducing overconfidence in the judgments of experts. AR 7493–505 (Speirs-Bridge, A, et al., *Reducing Overconfidence in the Interval Judgments of Experts*, Risk Analysis, 30(3), pp. 512–523 (2010)); AR 86 (citing Speirs-Bridge), 180 (same).

The SSA report began by noting that, of the 570 healthy eastern hellbender populations known to have existed across 15 states, currently 345 (61%) are extant, and 225 (39%) are presumed or functionally extirpated. AR 4. Of the 345 extant populations, 127 (37%) are likely healthy, and 218 (63%) are declining. AR 4. Efforts to survey the population of hellbenders has increased substantially over the past 5-10 years, such that of the 345 extant populations, 125 were discovered since 2012. AR 4. However, a lack of data regarding abundance or size class structure in these populations precludes assessments of population trends. AR 4. The current total number of populations varies among the four ACUs, with 1% in MACU, 39% in OACU,

51% in TACU, and 9% in KACU. AR 4. The current number of healthy populations varies as well, with 0 in MACU, 42 in OACU, 68 in TACU, and 16 in KACU. AR 4.

In consultation with the experts, FWS identified the risk (stressors) and conservation (beneficial) factors for the eastern hellbender's future population dynamics, as described in Chapter 5 of the SSA report. AR 4. The most influential factors were identified as: (a) sedimentation; (b) water quality degradation; (c) habitat destruction and modification; (d) direct mortality or permanent removal of animals; (e) disease; (f) habitat disturbance; (g) small populations, population fragmentation and isolation; (h) increased abundance of species of predators; (i) climate change; (j) synergistic effects; and (k) conservation efforts. AR 4–6. Of these factors, sedimentation was the primary stressor identified by the experts. AR 76. The experts also identified habitat restoration and management, captive propagation, augmentation, and reintroduction as conservation measures, while noting that the long-term success of reintroductions was unknown. AR 76.

Using the 4-step elicitation method, the experts were asked to predict the changes in the numbers of stable recruiting, declining, functionally extirpated, and presumed extirpated populations at 10-year, 25-year, and 50-year timeframes under three future scenarios: (i) reasonable worst plausible (“RWP”), (ii) reasonable best plausible (“RBP”), and (iii) “most likely” plausible (“ML”). AR 6. Because most experts had “little confidence” in, and some were “uncomfortable” with, predictions beyond 25 years, the SSA forecast the health and distribution of populations at 10- and 25-year increments for the three future scenarios. AR 6, 87, 185, 192–194 (tables showing little-to-no 50-year confidence by individual experts).

Because “the specific trajectory that plays out is unknowable, . . . [FWS] looked to those with extensive knowledge of Eastern Hellbender biology, status, and trends to garner insights.”

AR 147. Analyzing the ACUs that were delineated and vetted with conservation genetics experts, the experts projected the numbers of extant and healthy populations by year 25 for each ACU. AR 6–7, 190–97. For MACU, the experts’ future projections indicated 3–5 extant populations by year 25, with 4 total extant populations under the ML scenario, 2 healthy populations under the RBP scenario, and 0 healthy populations under the RWP scenario. AR 6. For OACU, the experts’ future projections indicated 30–108 extant populations by year 25, with 88 total extant populations under the ML scenario, and of those, 15–71 healthy populations are predicted to persist across spatially heterogeneous environmental conditions. AR 6. For TACU, the experts’ future projections indicated 112–154 extant populations by year 25, with the ML prediction skewed towards the RWP scenario, and of those extant populations, 40–91 healthy populations are predicted to persist across spatially heterogeneous environmental conditions. AR 7. Finally, for KACU, the experts’ future projections indicated 4–35 extant populations by year 25, with 13 total extant populations under the ML scenario, 13 healthy populations under the RBP scenario, and 0 healthy populations under the RWP scenario. AR 7. Across the entire range of the eastern hellbender, the number of extant populations was predicted to decrease by 2–52% over the next 10 years, and then lightly decrease from year 10 to year 25 under both the RWP and RBP scenarios, with the ML scenario skewed towards the RWP scenario. AR 7.

Despite the overall losses, the experts predicted that multiple healthy populations over a broad geographic range would persist over the next 25 years. AR 7. Although stressors are pervasive across the eastern hellbender’s range, and there is greater vulnerability for ACU-wide extirpation in both MACU and KACU due to the low number and reduced distribution of populations, the experts’ judgment was that a geographically wide distribution of populations in OACU and TACU guard against catastrophic losses rangewide. AR 7, 147–48. On the one hand,

the experts' ML predictions for MACU and KACU lay closer to the values of the RWP scenario, for OACU the experts' ML prediction skewed towards the RBP scenario, and for TACU the experts' ML prediction skewed towards the midpoint of the RBP and RWP scenarios. AR 147–48. All of the experts' predictions were predicated on reasonable assumptions that were documented in the SSA in the “Uncertainty” section. AR 148–50.

The SSA was peer-reviewed by two specialists with expertise in hellbender biology, ecology, and genetics. AR 2. The peer reviewers evaluated the SSA to ensure that the “listing determinations are based on scientifically sound data, assumptions and analyses,” and they submitted their responses to FWS. AR 2, 385–86 (peer reviewer comment), 696–704 (same). The SSA was then revised in light of the peer review comments and finalized. AR 74–177.

4. FWS Determined that Listing the Eastern Hellbender as Threatened or Endangered Is Not Warranted, but Proposed Listing the Missouri DPS as Endangered

FWS then considered whether the eastern hellbender was “in danger of extinction throughout all or a significant portion of its range,” or “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” 16 U.S.C. § 1532(6), (20). FWS first considered the status of the eastern hellbender throughout all of its range, and then considered its status throughout a significant portion of its range.

Because the eastern hellbender was “neither in danger of extinction now or likely to become so in the foreseeable future throughout all or any significant portion of its range,” FWS found “that listing the eastern hellbender as an endangered or threatened species [was] not warranted.” AR 9.

a. Not-warranted finding with respect to “throughout all its range”

Based on the expert-guided SSA, which encapsulated its review of the best scientific and commercial data available pertaining to the five listing factors, FWS concluded that “the stressors acting on the eastern hellbender and its habitat, either singly or in combination, are not of sufficient imminence, intensity, or magnitude to indicate that the subspecies is in danger of extinction (an endangered species) or likely to become endangered within the foreseeable future (a threatened species), throughout all of its range.” AR 8. FWS noted that the experts predicted that “numerous healthy (resilient) populations will persist over the next 25 years across a broad geographic range, including multiple representation units (ACUs),” despite a predicted decline over the next 10–25 years. AR 8. While the hellbender’s “redundancy is lower than in the past, the geographic wide distribution of populations, as well as the low to moderate risk of a catastrophic event, guards against catastrophic losses rangewide.” AR 8. The “predicted persistence of healthy populations across multiple ACUs provides redundancy, resiliency, and representation levels that are likely sufficient to sustain the subspecies now and into the future.” AR 8.

b. Not-warranted finding with respect to “significant portion of its range”

FWS also concluded, based on the SSA, that the eastern hellbender was not in danger of extinction or likely to become an endangered species within the foreseeable future throughout a significant portion of its range. AR 8–9. FWS looked to portions of the eastern hellbender’s range to determine whether there was “substantial information indicating that: (1) The portion may be significant, and (2) the species may be in danger of extinction or likely to become so in the foreseeable future in that portion.” AR 8. If both of these elements are met, then the portion “warrants further consideration” to determine whether the portion is in fact “significant” and the

species is indeed in danger in that portion. AR 8. Because the best available information indicated that eastern hellbender populations in MACU and KACU “may have lower viability and greater vulnerability to potential future stressors” than OACU and TACU, FWS evaluated whether MACU and KACU could be considered “significant,” meaning MACU and KACU were “biologically important in terms of the resiliency, redundancy, or representation of the species.” AR 8.

FWS observed that MACU and KACU “[h]istorically and currently” represented a small proportion of the total populations of eastern hellbender, with a small spatial extent. AR 8. Because the two ACUs have few healthy populations, they were “not currently contributing in an important way to the subspecies’ overall resiliency.” AR 9; *see also* AR 142 (MACU), 145 (KACU). Consequently, even if both ACUs were extirpated, while “the subspecies would lose some representation and redundancy,” there would still be “sufficient resiliency, redundancy, and representation in the remainder of the subspecies’ range [*i.e.*, OACU and TACU] such that it would not notably reduce the viability of the subspecies.” AR 9. FWS thus concluded that MACU and KACU do not represent a significant portion of the eastern hellbender’s range, and therefore “the eastern hellbender is not in danger of extinction or likely to become so in the foreseeable future in a significant portion of its range.” AR 9.

c. Endangered finding warranted as to the Missouri portion of the eastern hellbender’s range as a distinct population segment

Although the MACU did not represent a significant portion of the eastern hellbender’s range, FWS also conducted an analysis of the Missouri portion of the eastern hellbender’s range to determine whether it met the definition of a distinct population segment. AR 9–13. FWS concluded that the Missouri portion was indeed a DPS, and that this DPS “is presently in danger

of extinction through its entire range.” AR 12. FWS thus proposed listing the Missouri DPS of the eastern hellbender as an endangered species. AR 12.

LEGAL STANDARD

Summary judgment is warranted if “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). Where, as here, the Secretary’s determination whether to list a species as endangered or threatened is reviewed under the APA and presents a pure question of law, “a district court’s procedural decision to award summary judgment is generally appropriate.” *Aleutian Cap. Partners, LLC v. Scalia*, 975 F.3d 220, 229 (2d Cir. 2020).

While under 5 U.S.C. § 706(2)(A) a reviewing court must hold unlawful and set aside any agency action found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, the scope of review under the “arbitrary and capricious” standard is “narrow,” and courts should not substitute their judgment for that of the agency. *Karpova v. Snow*, 497 F.3d 262, 267 (2d Cir. 2007). “Courts are particularly deferential to the agency where the agency’s particular technical expertise is involved.” *New York v. Raimondo*, 594 F. Supp. 3d 588, 598 (S.D.N.Y. 2022) (internal quotation marks omitted); *accord Balt. Gas & Elec. Co. v. Nat’l Res. Def. Council, Inc.*, 462 U.S. 87, 103 (1983) (“[Where the agency] is making predictions, within its area of special expertise, at the frontiers of science, . . . as opposed to simple findings of fact, a reviewing court must generally be at its most deferential.”); *Nat’l Res. Def. Council v. EPA*, 808 F.3d 556, 569 (2d Cir. 2015) (“We afford the agency’s decision greater deference regarding factual questions involving scientific matters in its area of technical expertise.”).

An agency order is reviewed on the basis of the administrative record compiled by that

agency when it made the decision, not a new record made initially in a reviewing court, and a court examines the agency's reasoning articulated in the order by the agency itself. *See Fed. Power Comm'n v. Texaco, Inc.*, 417 U.S. 380, 397 (1974); *Camp v. Pitts*, 411 U.S. 138, 142 (1973); *Nat'l Audubon Soc'y v. Hoffman*, 132 F.3d 7, 14 (2d Cir. 1997). Thus, an agency determination will be overturned only when the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise. *Karpova*, 497 F.3d at 268. In other words, "so long as the agency examines the relevant data and has set out a satisfactory explanation including a rational connection between the facts found and the choice made, a reviewing court will uphold the agency action, even a decision that is not perfectly clear, provided the agency's path to its conclusion may reasonably be discerned." *Id.*; *see also Constitution Pipeline Co. v. N.Y. State Dep't of Envtl. Conservation*, 868 F.3d 87, 102 (2d Cir. 2017) (agency action must be upheld if there is "sufficient evidence in the record to provide rational support for the choice made by the agency").

ARGUMENT

After assembling the best available scientific and commercial data and convening a panel of scientists with expertise in the eastern hellbender, FWS examined the relevant data and set out an adequate explanation that rationally connected the underlying facts to its decision that listing the eastern hellbender as endangered or threatened is not warranted. This decision was reasonable and supported by the administrative record, including the detailed species status assessment resulting from expert input. None of FWS's findings were arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.

On APA review, courts must defer to the agency’s technical and scientific expertise, and this Court should not substitute its judgment—or Plaintiffs’ judgment—for that of the agency. Plaintiffs here may disagree with FWS’s determination that the eastern hellbender is not in danger of extinction throughout all or a significant portion of its range, or likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range, but mere disagreement with FWS’s decision is insufficient to set aside its determination. Accordingly, the Court should deny Plaintiffs’ summary judgment motion and grant Defendants’ cross-motion.

I. THE LISTING DECISION IS RATIONAL, REASONABLY EXPLAINED, AND SUPPORTED BY THE RECORD

FWS faithfully applied the statutory definitions of endangered and threatened species, and its listing decision was reasonable, supported by the comprehensive administrative record, and reflects a rational connection between the best available scientific and commercial data and FWS’s not-warranted finding.

A. FWS rationally considered each of the ESA’s listing factors and the current status of the eastern hellbender throughout all or a significant portion of its range.

FWS based its listing decision on its independent review and analysis of the best available scientific and commercial information regarding the past, present, and future threats to the eastern hellbender, the review of such information and expert guidance encapsulated in the SSA, and feedback from experts and peer reviewers. AR 2, 4, 9. FWS carefully summarized its rationale for its conclusions in a 15-page, duly promulgated Federal Register notice. AR 1–15.

To determine whether the eastern hellbender was endangered or threatened, FWS assessed the risk of extirpation of the eastern hellbender, both rangewide and for “a significant portion” of its range, relying on the “adaptive capacity units” or “ACUs” that were delineated

and vetted with conservation genetics experts. *See* AR 181–82. While the ESA defines a threatened species as “one likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range,” 16 U.S.C. § 1532(20), the ESA does not define the term “foreseeable future.” If FWS uses a reasonable interpretation of the undefined term “foreseeable future,” it should be accorded deference. *See Babbitt v. Sweet Home Chapter of Communities for a Great Ore.*, 515 U.S. 687, 703–04 (1995) (giving “some degree of deference to the Secretary’s reasonable interpretation” of undefined term in ESA in light of the “latitude the ESA gives the Secretary in enforcing the statute”).

The Department of the Interior has defined the term foreseeable future as “only so far into the future as [FWS] can reasonably determine that both the future threats and the species’ responses to those threats are likely.” 50 C.F.R. § 424.11(d).⁴ FWS is not required to “identify the foreseeable future in terms of a specific period of time,” and it considered the foreseeable future “on a case-by-case basis, using the best available data and taking into account considerations such as the species’ life-history characteristics, threat-projection timeframes, and environmental variability.” *Id.*

For the eastern hellbender, FWS defined the foreseeable future at 25 years, because most of the experts involved in the review had “little confidence” in, and some were outright “uncomfortable” with, predictions beyond 25 years. AR 6, 87, 185. Indeed, in the fourteen evaluations of “future response” at 50 years, the experts could not provide any guidance for 6

⁴ The effective date of this regulation was after the FWS decision at issue in this case, but the regulation was intended to formalize the principles already in practice pursuant to a 2009 DOI legal opinion and to provide a consistent explanation for the term “foreseeable future.” *See Endangered and Threatened Wildlife and Plants; Regulations for Listing Species and Designating Critical Habitat*, 84 Fed. Reg. 45,020, 45,026 (Aug. 12, 2019).

cases, provided the bare minimum confidence level of 50 (on a scale of 50-100) for 4 more cases, rated 3 cases at 60, and one case at 75. AR 192–94. In other words, for nearly half the cases the experts were completely unable to “foresee” the future response, and those that were able to evaluate at 50 years had minimal confidence in their projections, averaging less than 57 on a scale of 50-100. By contrast, at 25 years every expert provided a confidence level that averaged approximately 65, with multiple experts rating their confidence level at or above 80, and at 10 years every expert provided a confidence level that averaged nearly 73, with half of the experts rating their confidence level at or above 80. AR 192–94. In light of this evidence documented in the record, it was entirely rational and reasonable for FWS to conclude that the experts would be doing little more than speculating as to the future response at 50 years, and therefore FWS could not “reasonably determine that both the future threats and the species’ responses to those threats are likely” over the 50-year timeframe. 50 C.F.R. § 424.11(d).

1. Throughout “all” of its range

After defining the foreseeable future for the eastern hellbender at 25 years, FWS evaluated the five listing factors in the ESA. AR 3. Noting that “these factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species’ continued existence,” FWS “look[ed] for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.” AR 3. FWS considered various threats in the form of direct impacts and stressors, and “the expected response by the species, and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level.” AR 4. In conducting these analyses, FWS evaluated sedimentation; water quality degradation; habitat destruction and modification; direct mortality

or permanent removal of animals; disease and pathogens; habitat disturbance; small populations, population fragmentation and isolation; increased abundance of species of predators; invasive species; climate change; synergistic effects; and conservation efforts such as augmentation, habitat restoration, management, and preservation, captive propagation, state and federal laws (such as the Lacey Act⁵ and CITES,⁶ and state laws prohibitions on the sale of eastern hellbenders in all states within the species' range), monitoring and research, and public outreach. *See* AR 4–6 (“a brief summary of the most influential factors is presented” in the listing notice, while “a full description of these factors [is contained in] chapter 5 of the SSA report”), 107–29 (SSA report ch. 5). For this analysis, FWS considered the expert opinions of the hellbender scientists, who assessed, ranked, and quantified the relative effect of the various influences for each ACU. AR 109. The experts also made projections of the future conditions for the species within the ACUs, which FWS relied upon to conclude that “numerous healthy (resilient) populations will persist over the next 25 years across a broad geographic range, including multiple representation units (ACUs).” AR 8. Therefore, FWS reasonably concluded that “the predicted persistence of healthy populations across multiple ACUs provides redundancy, resiliency, and representation levels that are likely sufficient to sustain the subspecies now and into the future” such that there presented a low risk of extirpation. FWS reasonably concluded the eastern hellbender was not in danger of extinction or likely to become endangered within the

⁵ 16 U.S.C. §§ 3371–78.

⁶ The Convention on International Trade in Endangered Species of Wild Fauna and Flora. The eastern hellbender was listed in Appendix III of the Convention in 2011. *See Inclusion of the Hellbender, Including the Eastern Hellbender and the Ozark Hellbender, in Appendix III of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*, 76 Fed. Reg. 61,978 (Sept. 26, 2011).

foreseeable future throughout all of its range, and listing is not warranted. AR 8, 9. This decision was neither arbitrary nor capricious.

2. Throughout “a significant portion” of its range

FWS was also required to interpret “a significant portion” of the eastern hellbender’s range, as that term, too, is undefined by the ESA. *See* 16 U.S.C. § 1532(6), (20). “The phrase ‘significant portion of its range’ is ambiguous, and therefore, the agency’s interpretation of the phrase is entitled to deference unless it is unreasonable.” *Nat’l Wildlife Fed. v. Norton*, 386 F. Supp. 2d 553, 565 (D. Vt. 2005). Here, FWS defined four geographic areas that it defined as ACUs, and it vetted these definitions with conservation genetics experts. AR 181–82. Noting that the “range of a species can theoretically be divided into portions in an infinite number of ways,” and having already concluded that the eastern hellbender was not in danger of extinction or likely to become so in the foreseeable future throughout all of its range, FWS looked to portions of the eastern hellbender’s range for which there is substantial information indicating that (1) the portion may be significant, and (2) the species may be in danger of extinction or likely to become so in the foreseeable future in that portion. AR 8. If either of these initial elements is not present, then the species does not warrant listing because of its status in that portion of its range. AR 8. Consequently, FWS could choose to evaluate either element first, and it reasonably chose to begin by identifying any portions where the eastern hellbender may be in danger of extinction or likely to become so in the foreseeable future. AR 8.

FWS concluded that populations in MACU and KACU “may have lower viability and greater vulnerability to potential future stressors than the other two ACUs [OACU and TACU]” and thus, evaluated whether the two ACUs could be considered “significant.” AR 8. MACU and KACU are considerably smaller in geographic scope than OACU and TACU, representing only

62 of the 570 streams with historically documented populations, and 38 of 393 streams with current populations, or approximately 10% of the populations rangewide. AR 100–02. Moreover, the two ACUs combined represent a similarly small share of the healthy populations. AR 104. FWS thus reasonably concluded that they were not “contributing in an important way to the subspecies’ overall resiliency.” AR 9. Accordingly, FWS rationally considered the lack of contribution from these two ACUs and concluded that the loss of those populations “would still leave sufficient resiliency, redundancy, and representation in the remainder of the [eastern hellbender’s] range such that it would not notably reduce the viability of the subspecies.” AR 9. Therefore, FWS’s determination that the eastern hellbender is not in danger of extinction or likely to become so in the foreseeable future in a significant portion of its range, and thus listing is not warranted, is reasonable and should be upheld as neither arbitrary nor capricious. Indeed, the reasonableness of FWS’s determination is further bolstered by its more nuanced conclusion with respect to the MACU, which while not “contributing in an important way to the [hellbender’s] overall resiliency,” nevertheless constituted a distinct population segment that warranted listing as an endangered species. AR 12.

B. FWS relied on the limited, but best available scientific data concerning the eastern hellbender.

Under the ESA, FWS is required to use the “best scientific and commercial data available to it.” 16 U.S.C. § 1533(b)(1)(A). FWS is not required, however, to “find better data” just because the available data is “inconclusive.” *See Sw. Ctr. for Biological Diversity v. Babbitt*, 215 F.3d 58, 61 (D.C. Cir. 2000).

Here, FWS surveyed several decades’ worth of literature dating as far back as 1934, consulted nearly a dozen experts in the field (some of whom authored the relevant literature), and compiled a comprehensive SSA report summarizing the information and findings and describing

the methodologies used. AR 74–177; *see generally* AR 1087–7674 (literature). The SSA report “used the best available information, including peer-reviewed scientific literature, academic reports, and survey data provided by State and Federal agencies across the range” as well as “input from species experts to inform [FWS’s] analyses.” AR 76, 176 (“[T]o ensure our analyses are rigorous and based on the best available science, we sought out expert counsel to fill-in critical gaps in the state-of-knowledge.”). Furthermore, FWS and the experts recognized that many aspects of the eastern hellbender populations lack reliable data, and thus, FWS’s judgments are “necessarily predicated upon numerous assumptions, which could lead to over- and underestimates of viability.” AR 88; *see also, e.g.*, AR 4 (noting that over one-third of the known extant populations were discovered only since 2012); AR 4 (“A lack of data regarding abundance or size class structure in these populations precludes assessments of population trends.”), 102 (same); AR 88 (“Unfortunately, we lack stream-specific data for the future, and thus, cannot use it as a measure.”); AR 103 (“we lack the data on most newly-discovered populations to determine” the population trend).

Plaintiffs have not identified any literature or data that FWS failed to consider, and thus there is no basis to challenge the agency’s decision for failure to use the best available scientific and commercial data. *See N.C. Fisheries Ass’n, Inc. v. Gutierrez*, 518 F. Supp. 2d 62, 85 (D.D.C. 2007) (“Absent some indication that superior or contrary data was available and that the agency ignored such information, a challenge to the agency’s collection of and reliance on scientific information will fail.”). On the contrary, Plaintiffs’ complaint lies in the conclusion FWS reached after weighing the information in its area of technical expertise. *See, e.g.*, Pls.’ Br. at 34–35 (arguing that more weight should have been placed on a report of a 2007 workshop). The findings of FWS, however, are well-grounded in the available data, and FWS correctly found

that the SSA report contained and relied upon the best scientific and commercial data available on the eastern hellbender.

II. FWS’S NOT WARRANTED FINDING IS NOT ARBITRARY, CAPRICIOUS, AN ABUSE OF DISCRETION, OR OTHERWISE NOT IN ACCORDANCE WITH THE LAW

None of Plaintiffs’ asserted reasons to question the considered judgment of FWS establish that FWS’s not warranted finding is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law. Instead, Plaintiffs focus on outlier scenarios, second-guess reasonable determinations, and aim to substitute their subjective judgment for that of the agency that has particular technical expertise. Plaintiffs have failed to show that the agency has relied on factors that Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise. *Karpova*, 497 F.3d at 268. Accordingly, the Court should defer to FWS’s “particular technical expertise” and uphold its determination. *Raimondo*, 594 F. Supp. 3d at 598.

A. Plaintiffs’ narrow focus on the reasonable worst plausible scenario does not render FWS’s considered judgment arbitrary or capricious.

Plaintiffs appear to suggest that FWS must rely on only the RWP scenario and, based on that scenario, conclude that the eastern hellbender is in danger of extinction through its range. But Plaintiffs have not provided any authority in support of their assertion that FWS must find the species to be endangered or threatened based on the RWP scenario in and of itself, as opposed to the “most likely” scenario. FWS’s decision not to rely solely on the reasonable worst plausible scenario is neither arbitrary nor capricious.

Similarly, although if catastrophic events were to occur they would be potentially devastating for the species, FWS reasonably concluded that the two potential catastrophic events (disease and chemical pollution) were themselves not the most likely scenario for the species as a whole. For all ACUs, chemical pollution resulting in extirpation was considered to be “unlikely” or not applicable for the foreseeable future under both RWP and RBP scenarios. AR 146. For a disease catastrophe, the populations of the subspecies were unlikely to be extirpated in the larger ACUs (OACU and TACU) under an RBP scenario, but likely under an RWP scenario. AR 146. For the smaller ACUs (MACU and KACU), extirpation of populations was about as likely as not under an RBP scenario, but likely under an RWP scenario. AR 146. When looking at the eastern hellbender as a whole, it is only under the RWP scenario that it is likely the populations are extirpated in all four ACUs, and the species extinct on account of a catastrophic event. However, the catastrophic events were not likely, and thus, FWS reasonably concluded that under the most likely scenario there was a low risk of extirpation across the entire range of the species. FWS did not ignore the RWP or cast aside a warning; it considered it alongside the RBP and the assessments of scientists with expertise in the eastern hellbender’s biology, status, and trends across its historical range.⁷

By focusing solely on the RWP, Plaintiffs conflate the results of a catastrophic event (extirpation) with the likelihood that such an event would occur, and Plaintiffs seek to substitute their judgment as to the relative probability of the RWP for that of the agency. But the ESA does not call for an evaluation of only the worst possible outcomes, however unlikely; it requires FWS

⁷ Indeed, far from ignoring the RWP scenario or its effect on the ACUs, FWS carefully considered the the RWP (as well as the RBP and ML scenarios) for the MACU and concluded that listing the eastern hellbender in Missouri as an endangered distinct population segment was indeed warranted. AR 9–12. Plaintiffs do not challenge that decision.

to assess whether a species is “in danger of extinction throughout all or a significant portion of its range” or is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range,” 16 U.S.C. § 1532(6), (20), which are assessments of the future with inherent uncertainty.

Indeed, Plaintiffs’ suggestion to focus on the RWP is contrary to the literature from which the 4-step procedure, of which RWP is only one part, is derived. AR 7493–504. The RWP, standing alone, is meaningless; the goal of the 4-step procedure is to “reduc[e] overconfidence in the *interval judgments* of experts.” AR 7394 (emphasis added). “Interval judgments are useful because they contain information about uncertainty that is not provided by point estimate judgments, but are subjectively easier than full distributions for experts to produce.” AR 7395. “They are commonly used as part of procedures for eliciting expert opinion in risk assessment settings.” AR 7395. In other words, it is the confluence of RWP, RBP, ML, and the experts’ degree of confidence that forms the basis for evaluation. Contrary to Plaintiffs’ assertion, the goal is not simply to devise a reasonable worst plausible scenario and deem it a certain eventuality.

FWS reasonably concluded, based on the SSA report and the experts’ analysis of the RWP, RBP, and ML scenarios, that the eastern hellbender was not in danger of extinction, and not likely to become endangered, solely because of a reasonable worst probable outcome of extinction.

B. The experts’ reasonable best plausible scenarios are reasonable.

The experts convened by FWS used the best available scientific and commercial data to develop their reasonable best plausible scenario for each ACU. The scientists, who are all experts in the eastern hellbender’ biology, status, and trends across its historical range, identified habitat

restoration, management, and preservation, and captive propagation as two key conservation efforts. AR 127–28. With respect to habitat, among other things the experts noted that “[a]rtificial nest boxes have been successfully used by hellbenders in Ohio, West Virginia, Missouri, Virginia, and New York for reproduction,” even though the survival data on the resulting offspring is unknown. AR 127. With respect to captive propagation, the SSA report observed that efforts had increased in recent years, and captivity-raised individuals have been “released into the wild to augment existing populations or reintroduced into areas in which the species has been extirpated.” AR 127–28. While the success of such efforts is “still being studied,” and there is not yet data on whether the augmented members of the species successfully reproduce (unsurprising, given the lifespan), these programs are actively introducing hundreds of hellbenders back into the wild, with over 1,600 additional animals being reared for future release. AR 128.

Plaintiffs assert that FWS improperly relied on conservation efforts because they were “unproven,” but that is not the standard. As Plaintiffs concede, the real question is whether the conservation programs are currently operational, *i.e.*, whether they exist or are promised to be implemented in the future. Pls.’ Br. 26. Here, they are already operational and increasing the wild population: hundreds of hellbenders raised in captivity have been released to the wild, with hundreds more to follow; nest boxes have been “successfully” used for reproduction. While there is not yet sufficient data on the long-term success of such efforts in terms of reproduction in the wild,⁸ the efforts and population-increasing effects are sufficiently concrete and not speculative

⁸ Notably, Plaintiffs have not identified any authority to suggest that continued use of reproduction in captive propagation to increase numbers of hellbenders in the wild would be

so as to provide a rational basis for the experts, and thereby FWS, to conclude that conservation measures would be beneficial to the species' populations under an RBP scenario.

With respect to other factors in the RBP, Plaintiffs contend that FWS was irrational to permit its experts to conclude that there would be a reduction in negative influences over the next 25 years. Pls. Br. 23–25. But that mischaracterizes the views of the experts, who for the RBP had wide-ranging views from reductions in negative influences all the way to increases in negative influences (albeit less negative than the RWP). AR 130. While Plaintiffs cherry-pick from the list of uncertainties and caveats in the SSA report, they have failed to show that the scenarios considered by FWS are “demonstrably incorrect.” Indeed, no decisions were made solely on the basis of RBP or RWP scenarios; for two ACUs (MACU and KACU), the most likely scenario was determined to be closer to RWP, while for TACU it was towards the midpoint between the RWP and RBP, and only for OACU was it skewed towards RBP (note that augmentation is furthest along in Ohio). AR 147–48. The entirety of the SSA report is an effort to make reasonable decisions in the face of inherent uncertainty, and surely Plaintiffs would argue that FWS acted arbitrarily and capriciously were it not to consider uncertainty at all. But what Plaintiffs cannot do is second-guess the agency's decision because of a disagreement in judgment with the agency and its experts as to the “most likely” scenarios.

C. FWS reasonably determined that the eastern hellbender is not endangered or threatened in a significant portion of its range.

In analyzing the eastern hellbender's range on an ACU basis, FWS relied on a geographic segmentation that was vetted with conservation genetics experts. It then relied on this ACU

contrary to a finding that the species is not in danger of extinction (*i.e.*, no longer being in existence).

segmentation to assess whether the eastern hellbender was endangered or threatened in a “significant portion of its range.” Far from being “so implausible that it could not be ascribed to a difference in view or the product of agency expertise,” *Karpova*, 497 F.3d at 268, it is a reasonable, rational methodology for assessment, given that the SSA report and the experts all analyzed the future prospects of the species on an ACU basis.

Plaintiffs instead suggest that, for the “significant portion of its range” analysis, FWS should have considered “other levels of analysis,” such as at a state level. Pls.’ Br. 30–31. As an initial matter, the question is not whether using a state-by-state analysis would result in a better definition of “significant portion of its range,” but rather whether FWS’s definition and analysis is “unreasonable.” *Norton*, 386 F. Supp. 2d at 565. It is not. Indeed, the experts consulted by FWS utilized the ACU segmentation to conduct their scenario analyses, and FWS reasonably relied on their approach for its “significant portion” determination.

Second, Plaintiffs overstate the factual record when they assert that FWS’s determination that MACU and KACU are not a “significant portion” is irreconcilable with the best available scientific information (citing a 2016⁹ article by Hime et al.) because those two populations “will likely soon be recognized as distinct species.” Pls.’ Br. 30. The record simply does not support this assertion: as FWS pointed out in the SSA report, the 2016 Hime article indicates only “that these groupings *may* be modified in the future,” not that they are “likely” or “soon” to be recognized as distinct species. AR 97 (emphasis added). Indeed, the Hime article itself expressly notes that “more work remains to be done to test whether these different lineages represent distinct species.” AR 6574.

⁹ Plaintiffs appear to have miscited the date of the article as 2006; there is no 2006 article by Hime et al. in the administrative record.

Finally, Plaintiffs assert that, by looking at ACUs, FWS has functionally adopted a definition where a species would be in danger of extinction in a significant portion of its range only if it were in danger of extinction throughout all of its range. Pls.’ Br. 32. But that assertion is belied by the record, as FWS made clear that the analysis concluded not that the hellbender needed to go extinct everywhere for the MACU and KACU to be a significant portion, but instead that those two ACUs were not a significant portion because the other two ACUs “would still leave sufficient resiliency, redundancy, and representation”¹⁰ such that “it would not notably reduce the viability of the species.” AR 9. In sum, Plaintiffs’ criticisms of FWS’s “significant portion of its range” analysis are unfounded, and this Court should uphold FWS’s determination that MACU and KACU do not constitute a significant portion of the eastern hellbender’s range.

D. FWS applied a reasonable timeframe for the foreseeable future.

In light of the relative paucity of data and extreme uncertainty of forecasts out to 50 years, FWS reasonably adopted 25 years as the “foreseeable future” for its analyses. Plaintiffs contend that FWS failed to use the best available scientific data because it did not consider a report from 2007 (more than 5 years before approximately one-third of the known extant populations were discovered from 2012–18) that discussed a stochastic population model using a computer simulator named Vortex. Pls.’ Br. 34–35. While FWS was aware that 25 years is potentially less than the lifetime¹¹ of eastern hellbenders, the proposed modeling is not the best

¹⁰ Plaintiffs further assert that, in looking at an ACU-level, FWS ignored its determinations under the RWP scenario and whether the resulting breadth of the affected populations would constitute a significant portion of the species’ range, but this fails for the same reasons as their other arguments narrowly fixated on the RWP scenarios.

¹¹ Plaintiffs fundamentally misinterpret the science behind FWS’s analysis when they conflate the 25-30 year lifetime of eastern hellbenders with the concept of a “single generation of hellbenders.” A generation of living things is a single step or stage in descent; for example,

available scientific *data*, but instead are projections based on admittedly incomplete or non-existent data. AR 3 (“Maximum age is not known with certainty, but estimates suggest that eastern hellbenders can live at least 25 to 30 years in the wild.”); AR 5316 (“If these conditions reflect the true situation for this subspecies, then long-term viability is good for these hellbender populations in the eastern U.S. If, however, these assumptions are inaccurate, or if conditions change that result in population decline or habitat loss/degradation, the prognosis could be quite different.”); AR 5318 (“Population estimates and status for the Eastern hellbender in the eastern U.S. are less well known [than in the Midwest.]”); AR 5318–19 (characterizing model projections as a “best guess” because of a “paucity of detailed information”). Moreover, the very study Plaintiffs cite was co-authored by one of the experts who participated in drafting of the SSA report. AR 188 (listing Jeff Briggler as an expert with expertise in MO and MACU); 5323 (listing Jeff Briggler as a participant in the 2007 workshop). Were that not enough, Plaintiffs’ premise is incorrect—the very study they point to was directly acknowledged in the SSA report. AR 92 (citing “Briggler, et al. 2007, p. 82 [AR 5303]” in reference to “modelling a stable hellbender population”); *see also* AR 192 (MO expert providing confidence level of 60 on 50–100 scale).

Far from ignoring the previous modeling efforts, FWS engaged an expert with experience in modeling, acknowledged the past efforts to model, and took into account that very expert’s 50-year projection. In the aggregate, however, FWS observed that its experts lacked confidence

although the human lifespan is many decades, a single generation is on the order of one or two decades because humans (unlike cicadas) do not wait until their deathbed to procreate. Eastern hellbenders “sexually mature at an age of approximately 5 or 6 years.” AR 3, 5152–53, 7048. Thus, 25 years represents 4 to 5 generations of hellbenders, and FWS’s analysis considers the population over a reasonable horizon.

in, and were uncomfortable with, 50-year projections. It was neither arbitrary nor capricious, then, to define “foreseeable future” at 25 years instead of relying on untethered speculation.

E. FWS considered all relevant factors in reaching its decision.

FWS considered all of the statutory factors in reaching its decision regarding the eastern hellbender. Plaintiffs now contend that FWS ignored the fourth factor, the effect of existing regulatory mechanisms. Pls.’ Br. 27–29. They are mistaken; although the decisional document did not expressly mention laws, regulations, or ordinances, it is clear from the SSA report contained within the administrative record that FWS did consider this factor as part of its overall analysis. Under APA review, “the court shall review the whole record or those parts of it cited by a party.” 5 U.S.C. § 706(2). “Courts have consistently held that the term ‘the whole record’ refers to the full record that was before the agency, meaning the agency decision-maker, at the time of the decision.” *Comprehensive Comm. Dev. Corp. v. Sebelius*, 890 F. Supp. 3d 305, 308 (S.D.N.Y. 2012).

Among the myriad influences on the eastern hellbender that FWS considered, only the “most influential factors” were summarized in the decisional document, which expressly stated that a full description was in Chapter 5 of the SSA report. AR 4. Chapter 5 lists numerous factors that were considered by FWS, but not summarized in the listing notice, including “Other Beneficial Factors” such as “State and Federal Laws.” AR 128–29. The SSA report expressly notes that “All states within the range of the Eastern Hellbender have enacted legislation to protect rare or non-game animals, including the Eastern Hellbender.” AR 128. It further observes that because federal law (the Lacey Act) makes it illegal “to import, export, transport, sell, receive, acquire, or purchase in interstate commerce any wildlife taken, possessed, transported, or sold in violation of any law or regulation of any State,” and “[b]ecause sale of Eastern

Hellbenders is illegal in all states within the species’ range, interstate or international sale of Eastern Hellbenders collected in those states is prohibited by the Lacey Act.” AR 128–29. In addition to the Lacey Act, the eastern hellbender is protected by CITES and is listed as an Appendix III species. AR 129.

Ultimately, the SSA report did not identify federal or state laws as factors contributing to “Future Influences” under RWP or RBP scenarios. AR 130. The federal and state laws protecting the eastern hellbender were implicitly insignificant (*i.e.*, not among the “most influential factors,” AR 4) compared to the other factors affecting the species, and it was neither arbitrary nor capricious for FWS not to address the laws beyond Chapter 5 of the SSA report.

CONCLUSION

For the foregoing reasons, the Court should grant summary judgment in favor of Defendants and deny Plaintiffs’ motion.

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Respectfully submitted,

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